

Abstract

[0022] A device for use in an imaging system is provided including a direct conversion detector element configured to convert x-ray photons into electric current. The direct conversion detector element is comprised of a cathode surface, an anode surface having a plurality of anode side edges, and a plurality of detector side surfaces connecting the cathode surface to the anode surface. The plurality of detector side surfaces each have a detector depth. The device further includes a pixel array assembly positioned on the anode surface. The pixel array assembly includes a plurality of pixel side edges. Each of the plurality of pixel side edges is immediately adjacent one of the anode side edges. A guard ring is mounted around the plurality of detector side surfaces. The guard ring includes an upper ring edge, a lower ring edge, and a ring outer surface including a guard ring height.